

## **Abstract**

A knuckle hub assembly (10) and a method for manufacturing same whereby brake run out is produced includes a knuckle (12), a bearing (28) press fit into the knuckle (12), and a wheel hub (14) coupled to the bearing (28) and rotateable with respect to the knuckle (12). The wheel hub (14) has a flange surface (34) having a relief channel (60) formed therein. A plurality of wheel studs (44) are press fit into bolt opening (42) formed in the relief channel (60). This arrangement provides a flat flange surface (34) for mating with a rotor (42) to minimize brake run out. The knuckle hub assembly (10) is mounted into a floating tool for finish turning of the flange surface (34) to provide minimal run out and maximum flatness.